

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR PRELIMINARY PERMIT FREESTONE PUMPED STORAGE HYDRO PROJECT

FERC PROJECT NO.

Applicant:

Renewable Energy Aggregators

Agent:

Adam Rousselle II

VERIFICATION

This Application for preliminary permit is executed in the

State of Pennsylvania

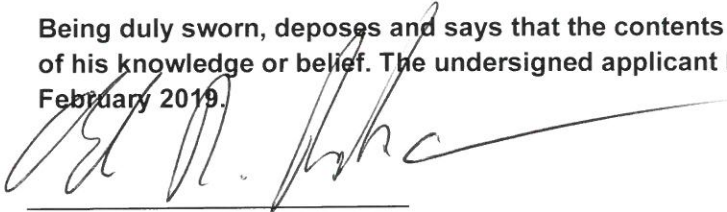
County of Bucks

BY: Adam Robert Rousselle II

5710 Oak Crest dr.

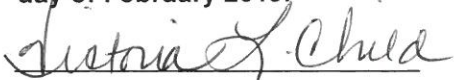
Doylestown, PA 18902

Being duly sworn, deposes and says that the contents of this application are true and to the best of his knowledge or belief. The undersigned applicant has signed the application this 13 day of February 2019.



Adam R. Rousselle II

Subscribed and sworn before me, a notary public of the commonwealth of Pennsylvania this 13th day of February 2019.



Notary Public

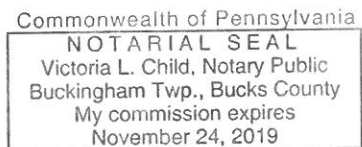


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Initial statement

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

Application for Preliminary Permit

- 1) Renewable Energy Aggregators applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed Freestone Pumped Storage Hydro Project, as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

2) **The location of the proposed project is:**

State or territory: GA
County: Dade
Township or nearby town: Trenton
Stream or other body of water: Nickajack Lake

State or territory: GA
County: Dade
Township or nearby town: Trenton
Stream or other body of water: Nickajack Lake

3) **Applicant's Contact Information**

The exact name, business address, and telephone number of the applicant are:

Renewable Energy Aggregators
Adam Rousselle II
5710 Oak Crest Drive
Doylestown, Pa 18902
Email: arousselleii@reaggregators.com
Phone: 215-485-1708

The exact name and business address of each person authorized to act as agent for the applicant is:

Adam Rousselle II
5710 Oak Crest Drive
Doylestown, Pa 18902
Email: arousselleii@reaggregators.com
Phone: 215-485-1708

4) **Statement of Authority:**

Renewable Energy Aggregators is a Corporation located in Doylestown, Pa. It is organized under the laws of the State of Pennsylvania and as such, the Applicant is qualified under §4(e) of the Federal Power Act (FPA) to hold hydroelectric licenses issued under Part 1 of the FPA. The Applicant is not claiming preference under §7(a) of the FPA at this time.

5) **The proposed term of the requested permit is 36 Months.**

6) **Existing Dams or Other Project Facilities**

There are no existing dams or project facilities. The lower reservoir may include an existing abandoned mining area(s).

A: Additional Information (18 CFR 4.32)

1) **The Applicant intends to obtain and will maintain and proprietary rights necessary to construct operate or maintain the project.**

2) **The names and mailing addresses of entities affected or used by the proposed project are provided below.**

a) County in which the project would be located:

- i. Dade County
71 Case Avenue
Trenton, GA 30752

3) **City, Town or similar local political subdivision**

a) Every City, town or similar political subdivision in which the project would be located:

Trenton, GA
12282 N. Main Street
Trenton, GA 30752

b) Every City, town or similar political subdivision that has a population of 5,000 or more people and is located within 15 miles of the project:

- 1. None

4) **Every irrigation district, drainage district, or similar purpose political subdivision:**

- a) in which any part of the project, and any Federal facilities that would be used by the project, would be located, or
- b) that owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project:

There are no known irrigation or drainage districts we are aware of and no federal facilities that would be used the project.

5) **Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application:**

There are no political subdivisions in the general area that this applicant is aware of.

6) **All Indian tribes that may be affected by the project.**

The Applicant is not aware that the Project affects any Native American tribe.

Exhibit 1- Project Description

1.1 General Project Description

Based on current conceptual design, the Freestone Pumped Storage Hydro Project involves the construction of a closed loop Pumped-storage hydroelectric generating facility capable of producing approximately 80 MW.

The basic configuration would include:

- As many as two pumping/generating units contained in a powerhouse
- A newly constructed lower reservoir of approximately 31.4 acres
- An Upper Reservoir
 - One approximately 84 -acre upper reservoir created through construction of a semi-circular dam containing 410,544,540 gallons of water
- One 48 " Penstock approximately 3,158-feet-long
- The project will have an approximate net head of approximately 839 feet.
- Emergency Spillway locations shown are approximate and require additional survey information to properly determine their location.

The Applicant proposes to create one upper reservoir with approximately 84 acres.

The Applicant anticipates that the lower reservoir will be filled from local inflow including groundwater inputs and operated at a surface elevation of 679 (ASL).

The upper reservoir would potentially be constructed using dam roller compacted concrete or earth and rock excavated from mine site reclamation. Preliminary designs estimate the upper reservoir to have a total surface area of approximately 84 acres and hold approximately 410,544,540 gallons of water at a pool discharge elevation of 1,518 feet ASL.

The average annual generation from this project would be approximately 351,482.98 MWh and the cost of the studies vary from \$150,000 to \$400,000.

1.2 RESERVOIRS

The estimated number, surface area, storage capacity, and normal maximum surface elevation (mean sea level) of any reservoirs, whether existing or proposed, that would be part of the project:

Upper Reservoirs

One with a surface Area 84 acres containing 1,259.92 acre feet of water
Storage Volume approximately 410,544,540 gallons
Drain Elevation approximately 1,518 feet above mean sea level
Composition of Dam Roller-compacted Concrete or Rock-Fill

Lower Reservoir

Surface Area 31.4 acres
Storage Volume 1,883.87 acre-feet
Surface Elevation 679 feet above sea level

1.3 EXISTING OR PROPOSED TRANSMISSION LINES

The estimated number, length, voltage, interconnections, and, where applicable, age and condition, of any primary transmission lines whether existing or proposed, that would be part of the project [see 16 U.S.C. 796(11)];

- (1) There are two contemplated interconnection areas one is a 69 kV circuit adjacent to the Lower Reservoir and a substation adjacent to the upper reservoir.
- (2) The Applicant will conduct studies to determine the location, number of circuits, voltage, and configuration of the project's interconnection with the regional utility network.
- (3) This project will also evaluate the use of any Transmission Circuits developed and related to the Wind Farm which is adjacent to the project.
- (4) A PJM Generation Interconnection Study is being planned as part of this study.

1.4 GENERATING EQUIPMENT

Hydroelectric Plant

- (1) Nominal Capacity 80 MW
- (2) Number of Units 1 units
- (3) Composition Francis or Pelton
- (4) Diameter 48"

Penstocks

- (5) From Upper Reservoir 48" approximately 3,158 feet

Powerhouse

- (6) Height approximately 25 feet
- (7) Length approximately 150 feet
- (8) Width approximately 50 feet

Average Annual Energy Production

Assuming a twelve-hour generation time and based on preliminary design of 80 MW, the Applicant anticipates an energy output of about 351,482.98 mWh annually.

1.5 LANDS OF THE UNITED STATES

- There are no lands of the United States included within the proposed project boundary.
- There are no known areas within or in the vicinity of the proposed project boundary that are included in or have been designated for study for inclusion in the National Wild and Scenic Rivers System.
- There are no areas within the proposed project boundary that are known to be under the provisions of the Wilderness Act or that have been designated as wilderness area, recommended for designation as wilderness area, or designated as wilderness study area.

1.6 PUBLIC INTEREST

- The proposed Freestone Pumped Storage Hydro Project will be achieved by installing a new hydroelectric generator which will utilize modern, state-of-the-art technology to optimize the clean, renewable electricity generating potential of site in a manner that best develops conserves and utilizes this resource for beneficial public use. The proposed project will fulfill the public interest for a less expensive, more reliable and environmentally sound source of renewable energy while creating energy jobs in an economically depressed area who has lost energy related jobs in the transition away from coal.
- The hydraulic capacity of the Freestone Pumped Storage Hydro Project will develop, conserve, protect and utilize in the public interest the public water resources of the region without damage to the environment. Development of the proposed project will reduce the acid rain and greenhouse effects associated with coal and oil fueled power plants that currently supply a significant portion of the energy needs of Georgia.
- Providing reliable peak energy on demand
- Creating Emergency and Pre-Emergency Load Response for PJM
- Creating Quick Start Reserves and grid storage for the PJM Grid
- Providing a means to store excess energy especially from intermittent renewable sources such as the Wind Farm at times when demand is low and large thermal plants cannot shed load.
- Enhancing local economics through creation of jobs during construction and for operations.

EXHIBIT 2 DESCRIPTION OF STUDIES

2.1 STUDIES PROCESS

The Applicant has reviewed substantial topographical, parcel ownership, municipal, economic as well as the mechanical and environmental aspects of the project and conducted a field visit.

2.2. STUDIES TO BE COMPLETED

The studies and related work to be completed will provide the applicant with the necessary information to prepare the application for license and to progress the concept development plan to final design. All work will be conducted in a manner so as not to affect cultural resources or endangered species, if any, and to cause minimal disturbance to the land and water. Any land altered or disturbed will be adequately restored to the satisfaction of the owner. The applicant proposes to carry out the studies below to determine the feasibility of the proposed project and support an application for license.

As the studies are being conducted the applicant will consult with appropriate federal, state, municipal and local agencies. The exact scope and scheduling of studies will be coordinated in accordance with consultation related to the integrated licensing process.

2.2.1 GENERAL PLAN AND SURVEY

A general plan and survey of the proposed project will be prepared to delineate the site topographic characteristics and approximate size, location and elevations of existing and proposed facilities.

2.2.2 GEOTECHNICAL STUDIES

The applicant will have a geotechnical engineer review existing geotechnical information and perform a current review and analysis of the project site. The geotechnical engineer will also analyze the geotechnical suitability of the foundation material for construction of any potential location for powerhouse and other structures.

2.2.3 WATER QUALITY STUDIES

Data collection for water quality will consist of reviewing existing water quality of the lower reservoir as well as performing new field sampling. Water quality characteristics of interest will primarily be related to acidity which may affect the Generation equipment.

2.2.4 RECREATION STUDIES

Analysis will be performed to assess potential use of the project area for to ensure that do not interfere with current recreational activities.

2.2.5 HISTORIC AND ARCHAEOLOGICAL STUDIES

There are no records of archaeological studies as the land has been primarily used for coal mining. Should any such studies exist, the applicant will have a qualified cultural resources firm review any previous studies and other existing documents, as required, to determine if any additional studies are warranted at this time.

2.2.6 FISHERIES STUDIES

As this project is a closed-loop Pumped Storage Hydro Project, field investigation will not include a review of fisheries unless the project feasibility study determines that access to an existing stream or river is necessary to perform the initial charge.

2.2.7 PRELIMINARY DESIGN STUDIES

Preliminary engineering design of the proposed powerhouse and electrical faults will be prepared to delineate the scope, cost and schedule for construction. A projection of energy generation will also be made. The preliminary design data will be utilized in the economic analysis to be preformed for the proposed project.

2.2.8 ECONOMIC ANALYSES

Economic analyses of the proposed project will be performed. The analysis will include estimates of power production and power sales rates. A transmission interconnection study will be performed to determine best location for interconnection and feasibility. The Economic criteria such as net revenue, net present value and benefit/cost ratio will be determined.

2. 3 ROADS

No new roads will be built for the purpose of conducting the studies referenced herein.

2.4 NEW DAM CONSTRUCTION

The proposed project contemplates the construction of as many as two new reservoirs. Accordingly, The Applicant will be working with approved State of Pennsylvania Dam consultants to properly determine the location, size and characteristics of the required reservoirs.

2.5 SCHEDULE FOR STUDIES

The following schedule has been developed for conducting the studies and consultations specified herein and leading up to the submission of a license application to the Commission at the conclusion of the requested 36-month term of the permit. This schedule assumes that a permit will be issued to the Applicant by January 15th, 2019. Based on the work to be performed under the requested permit, the Applicant will make a determination as to whether it is appropriate to follow the Integrated Licensing Process or request a waiver for either the Alternative or Traditional Licensing Process.

Permit Issued	Feb 2019
Perform Studies	Feb 2019-Nov 2019
Complete Initial Environmental Analysis	April 2019
Initiate License Process	December 2019
File License Application at FERC	Feb 2021

EXHIBIT 3 COST AND FINANCING

3.1. ESTIMATED COSTS

The estimated costs of carrying out and preparing the studies, investigations, tests, surveys, maps, plans and specifications identified in Exhibit 2 is \$170,000.00 allocated as follows.

General Plan and Geotechnical Studies	\$100,000.00
Water Quality Studies	\$1000.00
Recreational Studies	\$7,500.00
Historic and Archaeological Studies	\$0.0
Fisheries Studies	\$0.0
Preliminary Design Studies	\$35,000.00

Economic and Market Analysis	\$35,000.00
Total	\$178,500.00

3.2. FINANCIAL SOURCES

The applicant will provide the necessary financing to conduct the activities identified in Exhibit 2.

3.3. PROPOSED MARKET

Through the development of the proposed Freestone Pumped Storage Hydro Project, the applicant will provide an additional source of clean, renewable energy that will provide added stability and capacity to the local energy markets. It is proposed that the electricity generated at the Freestone Pumped Storage Hydro Project will be offered to the State or sold at market rates to either an electric utility marketer or for transmission to the electric grid. Based upon available feasibility and marketing studies conducted for the electric power market in the vicinity of the proposed project, project revenues are expected to be adequate to construct and operate the Freestone Pumped Storage Hydro Project and to yield a reasonable rate of return on investment.



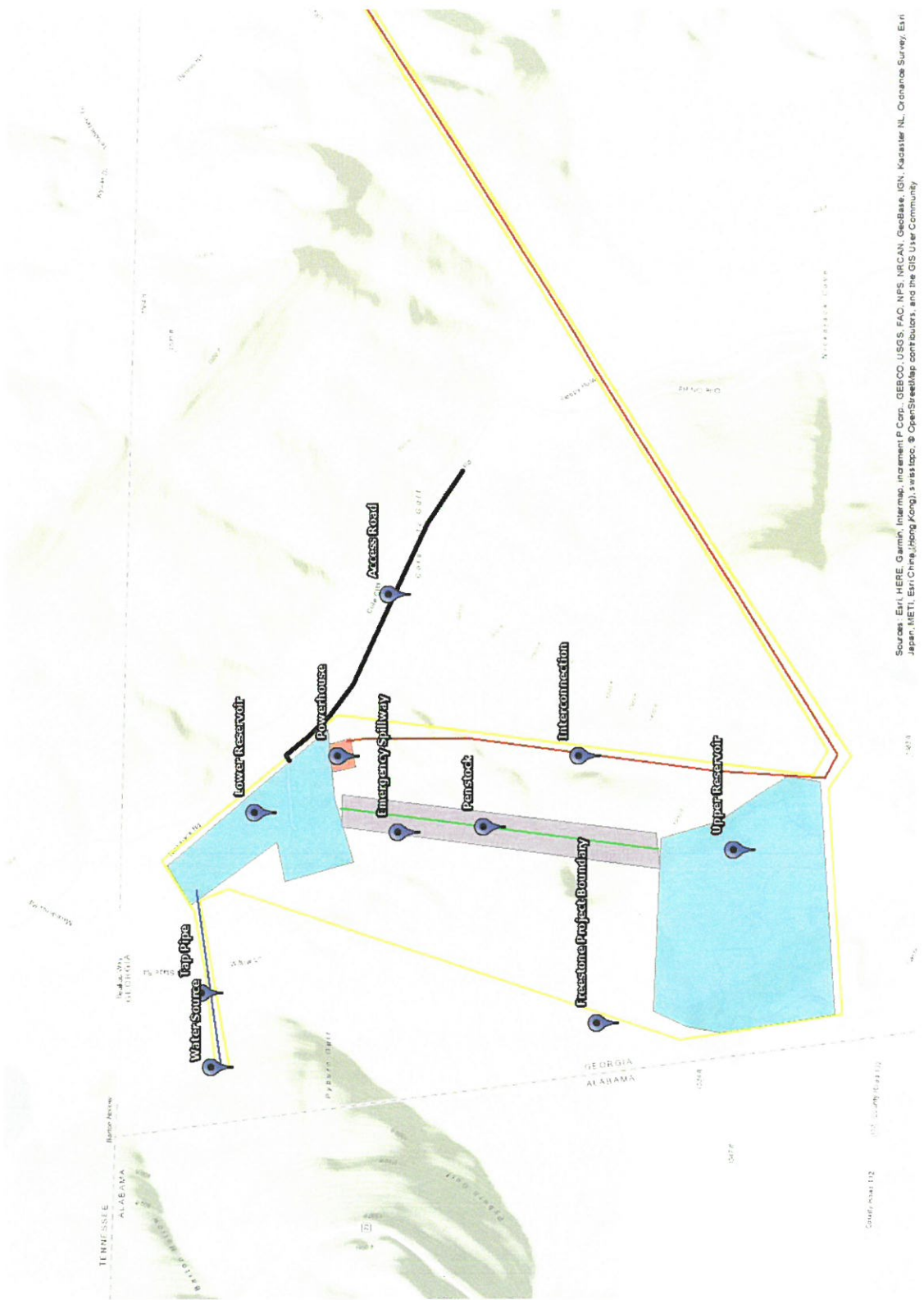
4.1.2: Freestone Project Overview Substation



4.2: Freestone Project Upper Reservoir and Penstock with Interconnection



4.3.1: Freestone Project Lower Reservoir with Tap Pipe and Water Source



4.4: Freestone Project General Map with Topography

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